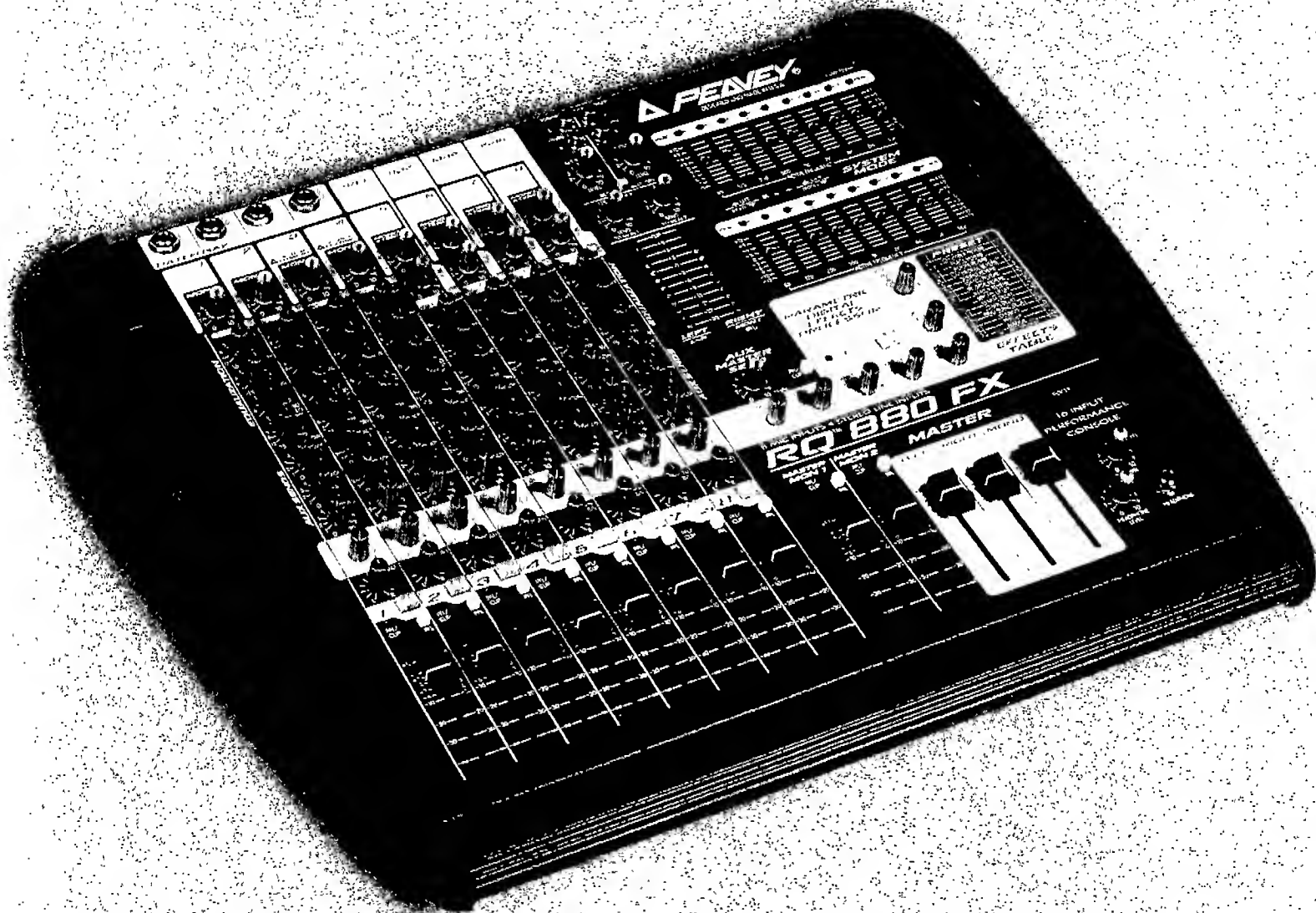


# RQ™ 880FX

8 Mic Inputs - 4 Stereo Line Inputs  
16 Input Performance Console





Intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



Intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**CAUTION:** Risk of electrical shock — DO NOT OPEN!

**CAUTION:** To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

**WARNING:** To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance, read the operating guide for further warnings.



Este símbolo tiene el propósito, de alertar al usuario de la presencia de "(voltaje) peligroso" que no tiene aislamiento dentro de la caja del producto que puede tener una magnitud suficiente como para constituir riesgo de corrientazo.



Este símbolo tiene el propósito de alertar al usuario de la presencia de instrucciones importantes sobre la operación y mantenimiento en la literatura que viene con el producto.

**PRECAUCION:** Riesgo de corrientazo — No abra.

**PRECAUCION:** Para disminuir el riesgo de corrientazo, no abra la cubierta. No hay piezas adentro que el usuario pueda reparar. Deje todo mantenimiento a los técnicos calificados.

**ADVERTENCIA:** Para evitar corrientazos o peligro de incendio, no deje expuesto a la lluvia o humedad este aparato. Antes de usar este aparato, lea más advertencias en la guía de operación.



Ce symbole est utilisé pur indiquer à l'utilisateur la présence à l'intérieur de ce produit de tension non-isolée dangereuse pouvant être d'intensité suffisante pour constituer un risque de choc électrique.



Ce symbole est utilisé pour indiquer à l'utilisateur qu'il ou qu'elle trouvera d'importantes instructions sur l'utilisation et l'entretien (service) de l'appareil dans la littérature accompagnant le produit.

**ATTENTION:** Risques de choc électrique — NE PAS OUVRIR!

**ATTENTION:** Afin de réduire le risque de choc électrique, ne pas enlever le couvercle. Il ne se trouve à l'intérieur aucune pièce pouvant être réparée par l'utilisateur. Confier l'entretien à un personnel qualifié.

**AVERTISSEMENT:** Afin de prévenir les risques de décharge électrique ou de feu, n'exposez pas cet appareil à la pluie ou à l'humidité. Avant d'utiliser cet appareil, lisez les avertissements supplémentaires situés dans le guide.



Dieses Symbol soll den Anwender vor unisolierten gefährlichen Spannungen innerhalb des Gehäuses warnen, die von Ausreichender Stärke sind, um einen elektrischen Schlag verursachen zu können.



Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.

**VORSICHT:** Risiko — Elektrischer Schlag! Nicht öffnen!

**VORSICHT:** Um das Risiko eines elektrischen Schlages zu vermeiden, nicht die Abdeckung entfernen. Es befinden sich keine Teile darin, die vom Anwender repariert werden könnten. Reparaturen nur von qualifiziertem Fachpersonal durchführen lassen.

**ACHTUNG:** Um einen elektrischen Schlag oder Feuergefahr zu vermeiden, sollte dieses Gerät nicht dem Regen oder Feuchtigkeit ausgesetzt werden. Vor Inbetriebnahme unbedingt die Bedienungsanleitung lesen.

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## RQ® 880FX Powered Sound Reinforcement Mixing Console

### General Description:

Congratulations on your purchase of the RQ® 880FX, the finest example of state-of-the-art mixing consoles. In one compact package, we have included the feature set of eight low noise-discrete microphone preamps, four stereo input channels, a stereo equalizer/automatic feedback finder, digital effects processor, and Peavey's world-famous ruggedness and reliability. You can feel confident that the RQ 880FX mixing console will meet your PA needs for many years to come.

To take advantage of the RQ 880FX's powerful features, please read this owner's manual carefully and keep it as a reference. This owner's manual includes several sections detailing individual areas of mixer operation, including: control functions, set-up, and applications in sound reinforcement.

The standard channels feature discrete low noise mic preamps with globally switched phantom power, low cut filters, and three-band EQs with a semi-parametric mid control. There are four auxiliary sends (two dedicated pre-EQ for monitor sends, two post-EQ/post-fader effect sends), mute, and PFL switches. The PFL logic automatically shifts the main Right meter to the PFL signal when any PFL button is pressed to assist in input gain adjustment, and operates even when the channel is muted. The mute circuitry squelches the L and R bus and effects sends.

"Super" mic channels 3 and 4 also have pad and phase reverse switches for those applications that require it, as well as the standard channel functions. There are no line inputs on these channels.

In addition to the four mic channels, there are four combination mono mic/stereo line-level channels for tape, CD, or synth inputs. Each of the four channels has all the standard channel functions including a separate discrete low noise mic preamp. The channels feature a separate control for the mic input and line-level stereo inputs. Also, the stereo line inputs on these channels can be selected to go through the channel to the L/R bus, or bypass the channel and feed directly to the L/R bus without EQ. This allows the mic and line inputs to be used simultaneously yet controlled separately. The monitor sends on these channels are fed simultaneously by stereo line inputs and mic inputs. The four stereo line input channels can also double as fully equalized stereo effects returns with PFL and mute, with sends to the main L/R mix and the Mon 1 and 2 mixes as well as the Aux 1 and Digital Effects buses.

The master section features a unique graphic equalizer mode switch that allows the user to select between stereo mode or main and monitor EQ mode. In stereo mode, the two graphic equalizers are used for the left and right channels. In mono mode, one equalizer is used for main left/right mix and the other is used for monitor output.

We have incorporated 16 digital effects into a processor that is included in the master section as the on-board digital signal processor. By including a separate time and damping/feedback control, the user can create many effect settings from the 16 we provided. All channels have a dedicated digital effects send routed directly to the DSP effects processor.

The balanced and unbalanced Left and Right equalized outputs each have LED meters. A balanced mono output (derived from the post fader Left and Right outputs) has its own level control.

A lamp connector is provided for Peavey 18" ML-2 or 6" ML-3 flexible lamps to illuminate the console in dark environments.



## CHANNEL INPUTS SECTION:

1. **LINE INPUT:** 1/4" balanced (TRS) high-impedance input for high-level signals. The tip is the positive input, which should also be used for unbalanced inputs. This input is connected through a 20 dB pad to the MIC input (#2). The two inputs cannot be used simultaneously.
2. **MIC INPUT:** XLR balanced low-impedance channel input optimized for a microphone or other low-level source. Pin 2 is the positive input. Because of the wide range of gain adjustment, signal levels as high as +10 dBV (3 V RMS) can be accommodated. When the phantom power is enabled, this connector has +48 V on pins 2 and 3 (pin 1 is ground reference).
3. **PAD:** Attenuates the input signal by 20 dB. This will increase the dynamic range to accommodate a higher input level before clipping, which may be necessary when close miking loud guitar amplifiers or drum kits.
4. **POLARITY:** Reverses the polarity of the input signal. This will compensate for an out-of-phase input that would otherwise cause frequency cancellations in the mix. (Often needed for drum mics where both sides of the drum head are picked up in multiple mic situations.)
5. **LEFT/MONO INPUT:** High-impedance input for line-level signals. The left/mono input supplies signal to both the left and right inputs (if there is nothing inserted to the right input jack) then through the line-level control, then to the direct/EQ switch. This input also supplies the Mon 1 and 2 sends.
6. **RIGHT INPUT:** High-impedance input for line-level signals. The right input supplies signal to the right input, then through the line-level control, then to the direct/EQ switch. This input also supplies the Mon 1 and 2 sends.
7. **PHANTOM POWER SWITCH:** Applies 48 V DC voltage to all input XLR connectors to power microphones that require it.

**CAUTION!** When phantom power is switched on, make sure that any channel you are plugging a mic into is muted, and all Monitor, Auxs, are at minimum. Otherwise there will be a loud pop in the PA. This is normal. It is best to plug all mics into their respective channels with the phantom power switched off. This reduces noise in the PA and reduces the chances of the mic being damaged.

If phantom power is used, do not connect unbalanced dynamic microphones or other devices that cannot handle this voltage to the XLR inputs. (Some wireless receivers may be damaged; consult their manuals.) The line input jacks (#1) are not connected to the phantom supply, and are safe for all inputs (balanced or unbalanced). An unbalanced-to-balanced impedance converter such as the Peavey 5116, or a Peavey 1:1 Interface Adapter can also be used to isolate a mic from phantom voltage.

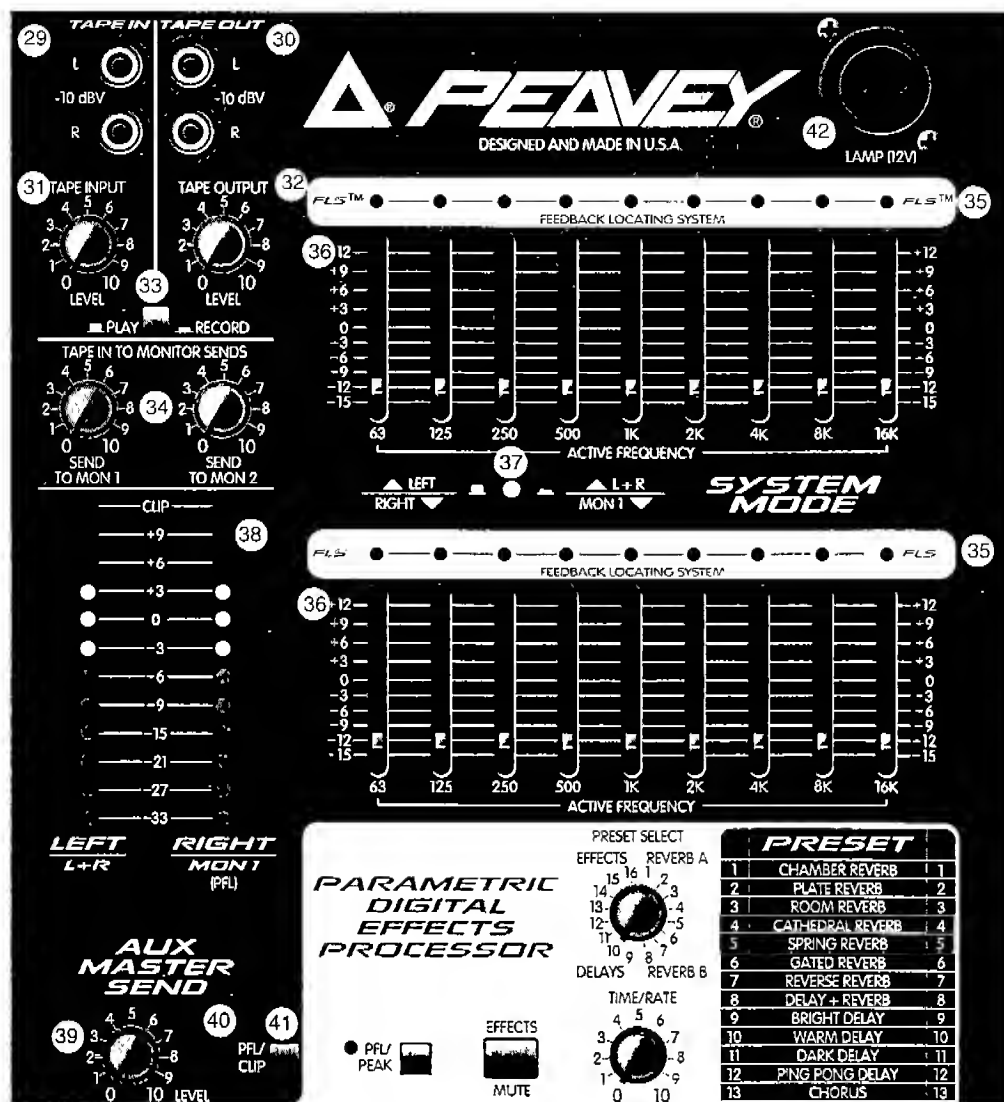


## CHANNEL SECTION:

8. **INSERT:** 1/4" stereo (TRS) jack allows an external device to be inserted into the signal path before the EQ. The tip has the send signal; the ring is the return input. A switch in the jack normally connects the send to the return until a plug is inserted. The Cal 32/Y cable (available from Peavey, #5299) can be used in the insert jack to patch into and out of effects devices. It is a "Y" cable adapter.
9. **MIC GAIN:** Varies the input gain to allow for a wide dynamic range. Proper adjustment of the input gain will maximize the signal-to-noise ratio. It should be set by depressing the PFL switch (#21) and adjusting for a 0 dB (+0 dBV) level at the Right meter.
10. **LOW CUT:** This is a low cut filter with a corner frequency of 75 Hz used to filter out rumble, wind noise, breath thumps, stage noise, and other low-frequency components that rob power from amplifiers and muddy the signal. The pre-EQ signal sent to the Mon 1 and 2 sends are picked up after this switch so that the monitors can also benefit from this filter.
11. **HI EQ:** A shelving type of active tone control that varies the treble frequency levels  $\pm 15$  dB at 10 kHz. It is designed to remove noise or to add brilliance to the signal, depending on the quality of the source.
12. **MID EQ:** Mid  $\pm 15$  dB. This control sets the amount of cut and boost at the mid-frequency selected.
13. **MID-FREQUENCY:** A semi-parametric sweepable (frequency select from 100 Hz to 3 kHz) type of active tone control that varies the mid-range frequency selected. These frequencies are optimum for bringing out the clarity of a vocal mic without adding harshness or grit, and can reduce feedback at mid to low frequencies. A slight cut within these frequencies can help a mic that has proximity effect to become more intelligible in close talking situations. It will also be useful to solve common feedback problems.
14. **LOW EQ:** A shelving type of active tone control that varies the bass frequency levels  $\pm 15$  dB at 70 Hz. It will add depth to thin signals, or clean up muddy ones.
15. **MON 1 and 2:** Adjusts the level of the channel signal (pre-EQ) that is added to the corresponding monitor mix. These are designed to be used for monitor sends with mono signals.
16. **AUX 1:** Adjusts the level of the channel signal that is added to the corresponding Aux mix. These are post-fader on all channels, and are configured in mono on all channels. They can be used to drive effects units.
17. **DIGITAL EFFECTS:** This control varies the level of signal from this channel to the digital effects processor. This control, along with the master send and effects return controls in the Master section, regulates the level of effects in the mixer.

18. **PAN:** Determines whether that channel will be heard in the left, right, or both channels in the main mix (stereo). In Mon 1/Mono Equalizer switch setting (#37), The pan will control the submix of left and right as they are mixed into a single signal into the left graphic.
19. **MUTE:** This control mutes the signal on this channel to the main left/right outputs, to the Aux output and to the effects processor. The PFL button still functions allowing the input gain to be adjusted or a tape to be queued.
20. **PFL/CLIP LED:** A dual function LED that illuminates when the signal level is nearing the overload point, or if the PFL switch is engaged. This circuit monitors the input gain, EQ, and post-fader stages for overload. It illuminates at +16 dBV and signals that gain or EQ boost should be reduced. (There is roughly 2 dB of headroom remaining when it lights.) When the PFL switch (#21) is depressed, it lights continuously to indicate that this channel has been assigned to the PFL mix.
21. **PFL:** Connects the channel's pre-fader signal to the PFL mix and switches the headphone/control room source from the L and R mix to the PFL mix. It also connects the PFL signal to the Right LED meter to aid in setting the input gain (#9). When this switch is pressed, the PFL/CLIP LEDs (#20) will illuminate to identify the PFL sources.
22. **CHANNEL FADER:** Channel output level control. Sets the level sent to the L and R bus. The optimum setting for this control is the "0" (unity gain) position.
23. **BALANCE:** Adjusts the balance of the stereo signal that is sent to the L and R bus. Functions as a pan control for mono signals from the Mic inputs on the stereo line channels.
24. **LOW EQ:** A shelving type of active tone control that varies the bass frequency levels  $\pm 15$  dB at 70 Hz. It will add depth to thin signals, or clean up muddy ones.
25. **MID FREQUENCY:** A bandpass (peak/notch) type of active tone control that cuts or boosts the mid-range frequencies  $\pm 15$  dB at 1 kHz.
26. **HI EQ:** A shelving type of active tone control that varies the treble frequency levels  $\pm 15$  dB at 10 kHz. It is designed to remove noise or to add brilliance to the signal, depending on the quality of the source.
27. **EQ/DIRECT:** This switch routes the stereo line-level inputs either through the channel or to the L and R bus only, bypassing the channel EQ and the Aux 1 and Digital Effects bus. This allows the stereo line input to be used simultaneously with the mic input. The Stereo line signal is always present at the Mon 1 and 2 controls.
28. **LINE LEVEL:** Varies the gain of the stereo input. The adjustment range is off to +15 dB. Proper adjustment will maximize the signal-to-noise ratio, and can be set using the PFL switch (#21). When the line input is set to direct, the line level control is used to control the level of the line input in the mix. This allows the line input to work independently of the mic input going through the channel.



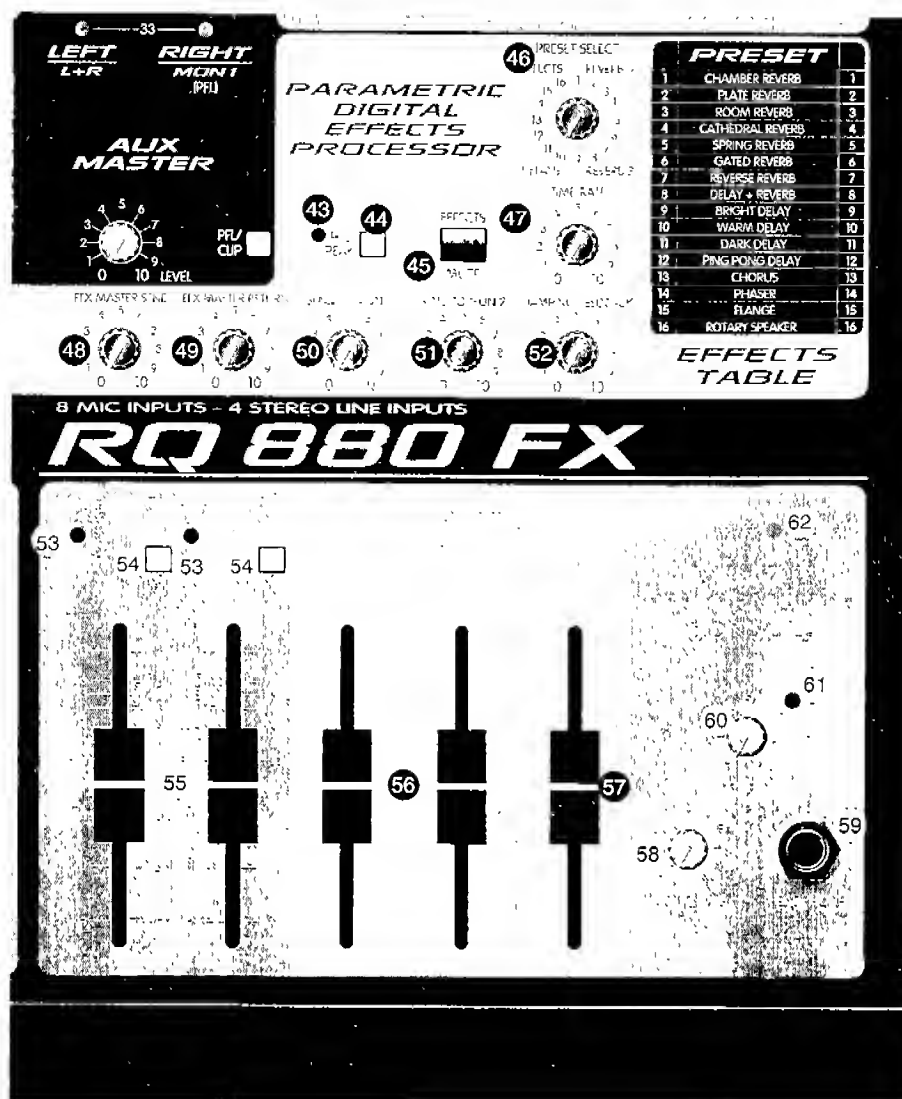


## MASTER SECTION

- 29.TAPE IN:** This stereo RCA phono jack accepts a stereo input (nominally -10 dBV) from the output of a tape deck or CD player. **CAUTION:** When recording, feedback can occur if the Play/Record switch (#33) is not switched to the Record mode.
- 30.TAPE OUT:** This stereo RCA phono jack provides a signal for the recording inputs of a stereo tape deck, with an amplitude set by the tape output level control (#32).
- 31.TAPE INPUT LEVEL:** Adjusts the level of the tape signal supplied to the L-R mix.
- 32.TAPE OUT LEVEL:** Sets the level of the main left and right stereo signal sent to the tape output jack. It is post master fader.
- 33.PLAY/RECORD SWITCH:** This switch mutes the mixer tape input when the switch is in "Record" position. If you are using the same tape deck for record and playback, you should set the switch to the "Record" position to prevent feedback. If you are using two tape decks, one to record and the other to play back, leave the switch in the "Play" position.
- 34.TAPE TO MONITOR SENDS:** Adds a mono sum of the tape signal to the Aux 1 or Aux 2 mixes. These are used to send the tape signal to monitors for soundtrack monitoring, or for singers to use while singing by pre-recorded song tracks.



- 35. FLS®:** (Feedback Locator System) These LEDs illuminate to indicate the frequency band of highest energy. When feedback occurs, the lit LED will indicate which graphics slider should be used. Move the slider down as little as necessary to reduce feedback. (**NOTE:** These LEDs illuminate with any audio signal, not just during feedback.)
- 36. GRAPHIC EQUALIZERS:** These 9-band equalizers are fixed on one octave centers. They are designed for 15 dB of cut, and 12 dB boost. They are connected directly to their respective outputs.
- 37. SYSTEM MODE:** The System Mode Switch connects the graphic equalizers and the main outputs for either one of two modes; stereo mode, or main and monitor EQ mode. In stereo mode the two graphic equalizers are used for the left and right channels. In mono mode, the upper equalizer is used for the main left + right mix and the lower equalizer is used for the Monitor Output 1. Because the Left and Right channels are combined in the mono mode, they can be used as submixes to make your mixing job easier. For example, the vocal mics could all be panned to the left channel and all instruments panned to the right. This then makes the left master control the vocal master and the right the instrument master. The Mode Switch is recessed to prevent it from being accidentally changed. To change the switch, use a small object such as a tooth pick or pencil.
- 38. LED METERS:** Two 12-segment LED arrays monitor the levels of the main L-R outputs. The 0 dB reference level corresponds to 0 dBV. When the Mode switch is depressed, the LED meters switch to (L + R) Mono on the left array, and Monitor 1 on the right array. The right meter array is also used for PFL metering. When any PFL is selected, the left array is defeated and the right array then becomes the PFL level only.
- 39. AUX MASTER LEVEL:** Aux 1 mix output level control. Sets the Aux 1 level sent to the output jack (#67). The optimum setting for this control is 5 (unity gain) position.
- 40. AUX PFL/CLIP LED:** Illuminates when the Aux PFL switch (#41) is depressed to indicate that this signal has been assigned to the PFL mix. Also will illuminate to indicate 2 dB of headroom left before clipping.
- 41. AUX PFL:** Connects the Aux signal (pre-Aux Master Level) to the PFL mix and switches the headphone source from the L-R mix to the PFL mix. It also connects the Aux PFL mix signal to the right meter.
- 42. LAMP CONNECTOR:** An XLR connector is provided for low voltage lamps (such as the Peavey ML-2 or ML-3) to illuminate the console in poorly lit environments. The connector supplies 12 V DC at 200 ma between pins 1 and 2. The total maximum load should not exceed 200 ma. This connector is short circuit protected, with automatic reset when a short is removed.
- 43. EFFECTS PFL/PEAK LED:** Illuminates when the Effects PFL switch (#44) is depressed to indicate that this signal has been assigned to the PFL mix. Also will illuminate to indicate 6 dB of headroom left before clipping in the Digital Effects Processor. Use the Effects Master Send to set the input level to the internal digital effects processor so that the Peak LED flashes occasionally on loud passages.
- NOTE:** This PFL/PEAK LED is different than all the others on the mixer, because it is set to light at 6 dB below clipping the digital processor. It can flash occasionally, but not stay on steadily. This control should be set to illuminate the peak LED occasionally before setting the level of the Effects Return control.
- 44. EFFECTS PFL:** This switch allows the user to listen to the output of the digital effects processor and to display its level on the right meter. To make it easier to evaluate the sound of the effects, some of the pre-effects (dry) signal is mixed with the PFL effects signal.



- 45. EFFECTS MUTE:** Mutes the Effects signal from the digital effects processor to the L-R and Send to Monitor 1 and 2 if enabled. It does not affect the PFL signal, which can be used to adjust the digital effects processor (through the headphones) when the digital effects output to the Mains or Monitors is muted.
- 46. EFFECTS PRESET:** This control chooses the preset that is listed in the Preset Effects Table. There are eight reverbs, four delays, and four effects. When a new effect is selected, it causes the PFL/CLIP LED to blink to indicate the effect is loaded. SEE EFFECTS PROCESSOR PRESETS.

#### EFX Presets

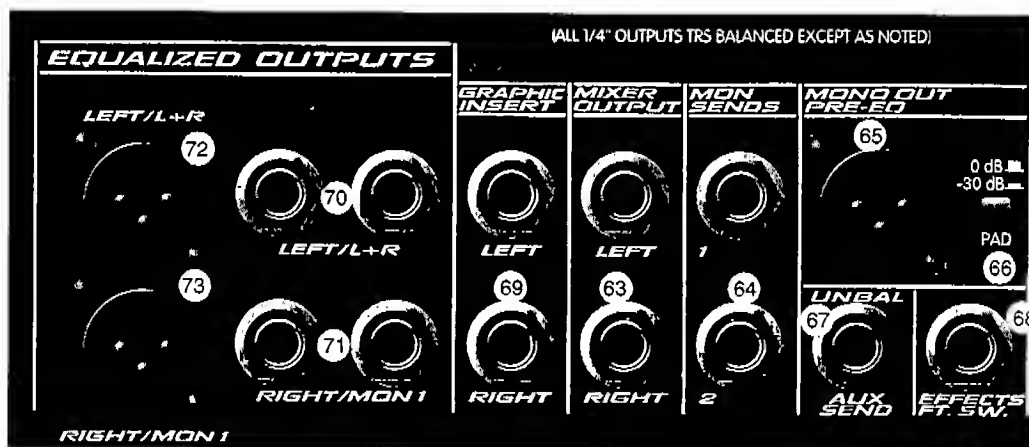
<u>PRESET</u>	<u>NAME</u>	<u>PARAMETER 1</u>	<u>PARAMETER 2</u>
1	Chamber	Time: 150 to 5,000 ms	Damping: (High Frequency)
2	Plate	Time: 100 to 4,000 ms	Damping: (High Frequency)
3	Room	Time: 150 to 5,000 ms	Damping: (High Frequency)
4	Cathedral	Time: 100 to 8,000 ms	Damping: (High Frequency)
5	Spring	Time: 150 to 5,000 ms	Feedback: (High Frequency)
6	Gate	Time: 150 to 500 ms	Feedback: (High Frequency)
7	Reverse	Time: 0 to 500 ms	Feedback: (High Frequency)
8	Delay + Reverb	Time: 0 to 225 ms	Reverb: Time 0 to 5,000 ms

### EFX Presets (continued)

<u>PRESET</u>	<u>NAME</u>	<u>PARAMETER 1</u>	<u>PARAMETER 2</u>
9	Bright Delay	Time: 0 to 500 ms	Feedback: 0 to 99%
10	Warm Delay	Time: 0 to 500 ms	Feedback: 0 to 99%
11	Dark Delay	Time: 0 to 500 ms	Feedback: 0 to 99%
12	Ping Pong Delay	Time: 0 to 500 ms	Feedback: 0 to 99%
13	Chorus	Rate: 0.125 to 8 Hz	Depth: Best Set Full CW
14	Phaser	Rate: 0.250 to 16 Hz	Depth: Best Set Full CW
15	Flange	Rate: 0.10 to 2.5 Hz	Depth: Best Set Full CW
16	Rotary Speaker	High Speed: 0.50 to 25 Hz	Width: 0 to 100% CW

- 47. TIME/RATE:** In Reverb and Delay presets, it adjusts the time of the particular reverb or delay; in Chorus, Phaser, and Flange, it adjusts the rate of each. In Rotary Speaker setting, this adjusts the speed of the speaker rotation.
- 48. EFFECTS MASTER SEND:** The Effects mix output level control. which sets the Effects level sent to the internal Digital Effects Processor. The digital effects processor has an automatic level control in its input signal path, which helps prevent accidental overdriving of the digital processor; however, it is not a substitute for proper set-up of the levels into and out of the processor.
- 49. EFFECTS MASTER RETURN LEVEL:** Effects return output level control. Sets the Digital Effects output level sent to the Left and Right mixing bus.
- 50. and 51. SEND TO MONITOR 1 and 2:** These controls are used to send the signal from the digital effects processor to the Monitor 1 and Monitor 2 mixes, allowing the performers to hear the effects in their monitor speakers.
- 52. DAMPING/FEEDBACK:** In Reverb setting, this control adjusts the high-frequency content of the reverberated audio. It varies from allowing only 200 Hz and below at minimum, up to 14 kHz at the maximum clockwise adjustment. In Delay it adjusts the feedback only, in Chorus and Flange it adjusts Depth, and in the Rotary Speaker mode, it adjusts Width.
- 53. MONITOR 1 and 2 PFL/CLIP:** A dual function LED that illuminates when the signal level is nearing the overload point, or if the PFL switch is engaged. It illuminates at +16 dBV. (There is roughly 2 dB of headroom remaining when it lights.) When the PFL switch (#54) is depressed, it lights continuously to indicate that this Mon has been assigned to the PFL mix.
- 54. MONITOR 1 and 2 PFL:** Connects the selected Monitor signal (pre-master level) to the PFL mix and switches the headphone/control room source from the L-R mix to the PFL mix. It also connects the PFL signal to the Right meter to aid in monitoring the output level.
- 55. MONITOR 1 and 2 MASTER LEVEL:** Sets the overall level of the Monitor 1 and 2 signal that is sent to the output jacks (#55). It is best set at "0" unity gain.
- 56. MASTER LEFT/RIGHT:** Separate faders that set the level of the left/right mix. The output level is monitored by the left and right meters AFTER the graphic equalizers. The optimum setting for this control is the "0" (unity gain) position.

- 57. MONO LEVEL:** Adjusts the level of the mono mix output (#65). The signal is a post-fader sum of the left and right output signals. The "0" position is the unity gain setting; 10 dB of gain boost is available.
- 58. HEADPHONE LEVEL:** Adjusts the volume of the headphone outputs. The output changes from the L-R mix (post-fader) to the PFL mix whenever the PFL is active.
- 59. HEADPHONE OUTPUT:** This stereo jack (TRS) provides the signal to drive stereo headphones. It changes from the L-R mix to the PFL mix when the PFL is active. The level is set by the headphone level control (#58). Tip=Left, Ring=Right, Shield=Ground.
- 60. PFL MASTER LEVEL:** Sets the level of the PFL mix that is sent to the headphone level control. Functions only when PFL is active.
- 61. PFL ACTIVE:** This LED illuminates when the PFL is active and its signal is overriding the standard L-R mix in the headphone outputs, and at the L-R meters. The signals that are present in the PFL mix can be seen by the individual LEDs lit.
- 62. POWER:** The power on LED indicator will light when the unit is powered.

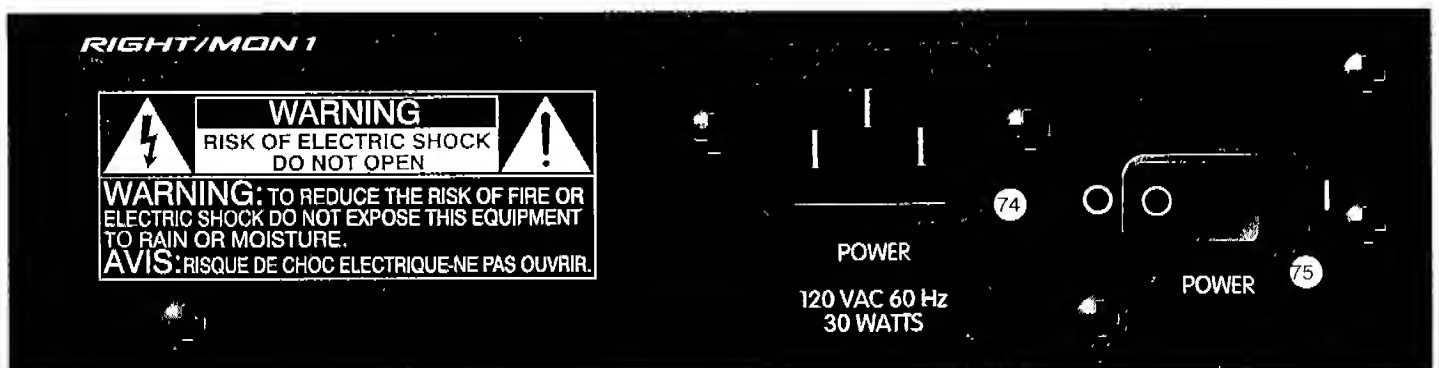


#### MASTER SECTION OUTPUTS:

- 63. L and R MIXER OUTPUTS:** 1/4" balanced, (Tip=High, Ring=Low, Shield=Ground) outputs of the Left and Right mixes. The upper jack is the Left output, and the lower jack is the Right output. Their levels are set by the respective master L/R faders.
- 64. MONITOR 1 and 2 SENDS:** 1/4" balanced, (Tip=High, Ring=Low, Shield=Ground) outputs of the Mon 1 and Mon 2 mixes. The upper jack is the Mon.1 output, and the lower jack is the Mon 2 output. Their levels are set by the respective master Monitor faders.
- 65. BALANCED MONO OUTPUT:** An XLR balanced output of the mono mix. The level is set by the mono level control (#57). Pin 2 is the positive output.
- 66. PAD:** Attenuates the Mono output signal by 30 dB. This may be necessary when sending this output into another mixer that requires low-level signals to prevent overloading its inputs.
- 67. AUX SEND:** Output jack of the corresponding Aux mix. It is unbalanced, and can be used to feed an external or effects unit. The level is set by the Aux master level (#39) and the individual channel level controls (#16).

- 68. EFFECTS FOOTSWITCH:** This jack is for a footswitch such as the Peavey #5100 single footswitch. This jack will disable the effects board output except in Rotary Speaker mode, where it will change the speed of the Rotary Speaker from fast to slow.
- 69. GRAPHIC INSERTS:** These jacks are used to connect to the input of the graphic equalizers, which feed the equalized outputs. Connecting to these inputs will break the normal connection to the graphic equalizer.
- 70. LEFT/L+R OUTPUT:** These parallel (TRS) balanced 1/4" output jacks are the outputs from the upper graphic equalizer. The signal on these outputs is set by the system mode switch and is either the left channel or a mono mix of left and right. These output jacks can be used with a high-quality shielded patch cables such as the Peavey FMJ Patch Cable if the equipment to be connected is nearby. If the cable needs to be longer than 25 feet, it is best to run a balanced line using a TRS 1/4" cable or the XLR balanced output jack (#72).
- 71. RIGHT/MONITOR OUTPUT:** These parallel (TRS) balanced 1/4" output jacks are the outputs from the lower graphic equalizer. The signal on these outputs is set by the system mode switch and is either the right channel or a monitor 1 output. These output jacks can be used with a high-quality shielded patch cables such as the Peavey FMJ Patch Cable if the equipment to be connected is nearby. If the cable needs to be longer than 25 feet, it is best to run a balanced line using a TRS 1/4" cable or the XLR balanced output jack (#73).
- 72. BALANCED LEFT/L+R OUTPUT:** Balanced XLR output for the Left bus when in stereo mode and the L+R bus when in mono mode. This is the preferred output for transferring the signal from the mixer to a power amp. Always use high-quality, shielded mic cables like the Peavey AU-2 Low-Z Cable.
- 73. BALANCED RIGHT/MONITOR OUTPUT:** Balanced XLR output for the Right bus when in stereo mode and the Monitor bus when in mono mode. This is the preferred output for transferring the signal from the mixer to a power amp. Always use high-quality, shielded mic cables like the Peavey AU-2 Low-Z Cable .

### Domestic Version



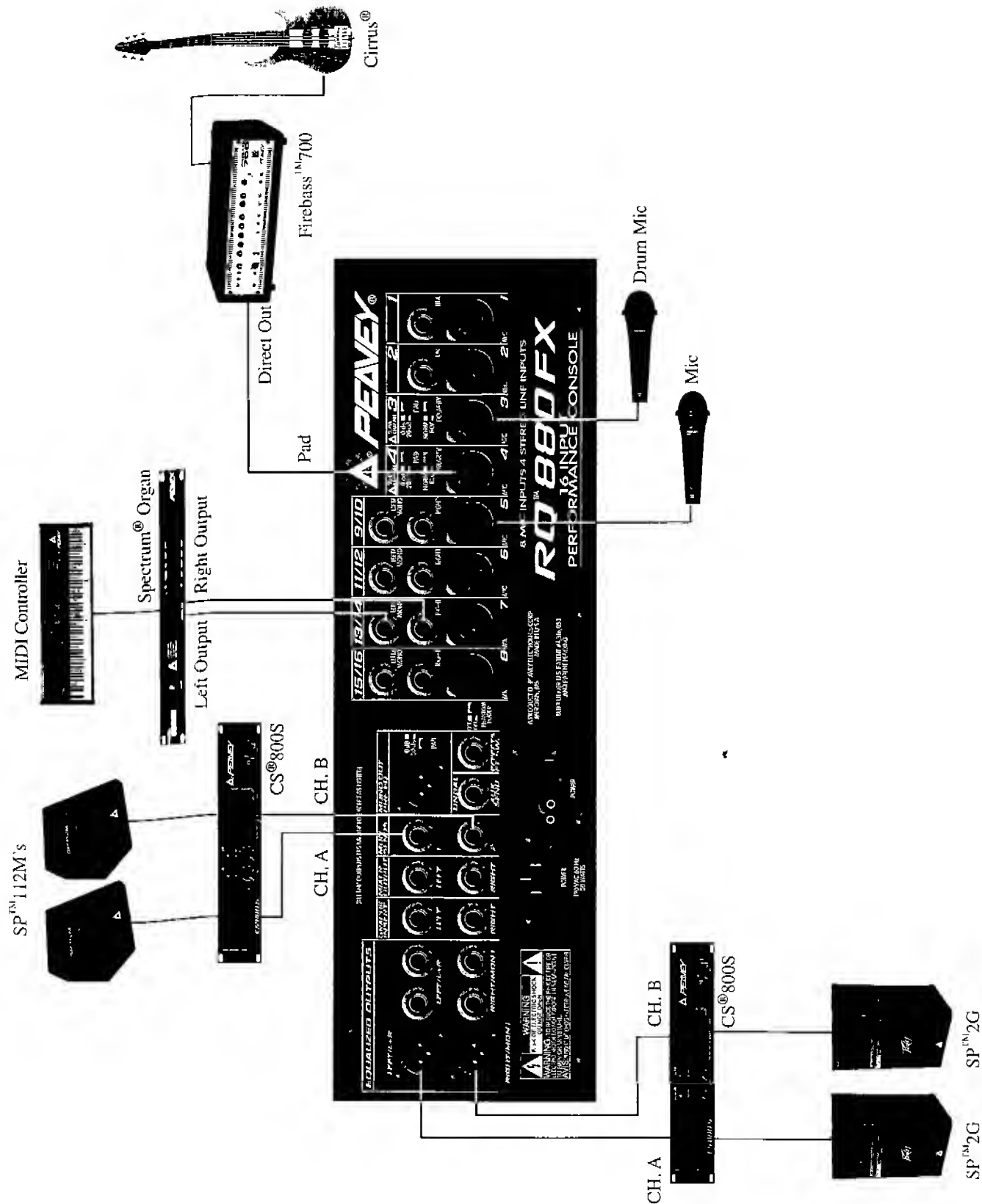
- 74. A/C POWER INLET:** This is the receptacle for an IEC line cord, which provides AC power to the mixer. Connect the line cord to this connector to provide power to the unit. Damage to the equipment may result if improper line voltage is used (see line voltage marking on unit).
- 75. POWER:** The mixer's main power switch. The power on LED indicator (#62) will light when the unit is powered.

## RQ™ 880FX MIXER APPLICATIONS

### SOUND REINFORCEMENT:

1. Microphones and other low-impedance sources are connected to the XLR mic inputs; high-level line inputs, such as electronic musical instruments, are connected to the 1/4" line inputs. If problems arise because a microphone either picks up an out-of-phase signal (as when using multiple drum microphones), or a very loud signal that causes clipping even at a minimum gain setting (as when close miking an amplifier or a drum head), it can be connected to a channel with pad and polarity switches (channels 3 and 4). Stereo line-level sources (synth, tape, CD, etc.) can be connected to a stereo channel, or to two of the mono line inputs (one panned left, the other panned right.)
2. The power amplifiers are connected to the mixer outputs as needed. One two-channel amplifier will be connected to the equalized outputs and used for the left and right speakers or main speakers and monitor depending on the position of the system mode switch. The Mono output can be connected to an amplifier and used in applications such as church nursery or radio feed or an adjoining room at a club.
3. If stage monitors are needed and the built in graphic equalizers are used for the main system, connect an amplifier to the mixer monitor outputs. These outputs are TRS balanced but can be used unbalanced as well.
4. If an external effects device is used, connect its input to the Aux Send output (#5).
5. If an external effects device is going to be used in addition to the internal effects processor, connect the Aux output jack to the device's input. Connect the effects processor output to one of the line inputs 9-16. By setting the EQ direct switch on the channel to direct, the effects return will be sent to the left/right channels still leaving all eight mic inputs available.
6. If a tape deck is going to be used with the system, connect it to mixer at this time. If both the inputs and outputs of the deck are connected (if it will be used both for recording and playback), be sure to set the mixer record/play switch to record before engaging the record button on the deck to prevent feedback. If you need tape in the monitors, use the send to monitor controls. If you want to play back a tape and equalization is needed, connect the tape deck to one of the stereo inputs (9-16).
7. On channels 1-4, the inserts can be used to patch compressors or EQ into the path. The Insert points are pre-EQ, pre-fader. Tip is send, ring return and sleeve is ground.
8. Aux 1 can also be used as a sub mix. Examples: cry room, waiting room, lobby mix, tape recorder, etc.
9. Connect the Left and Right outputs to the two-track mixdown deck inputs. If a graphic EQ, compressor/limiter, or enhancer is used, connect it between the Left and Right outputs and the tape deck inputs.

# RQ® 880FX Wiring Diagram



## RQ® 880FX Powered Sound Reinforcement Mixer

### Specifications:

#### **Input Specifications:**

Function	Input z (ohms) Min	Input Gains control setting	Min**	Input Levels Nominal*	Max	Bal/ UnBal	Connector
Microphone (150 ohms)	2 k	Max Gain (56 dB)  Min Gain (10 dB)	-74 dBV  -30 dBV	-56 dBV  -10 dBV	-38 dBV  +10 dBV	Bal	XLR: Pin 1 Gnd Pin 2 (+), Pin 3 (-)
Line (10K ohms)	10 k	Max Gain (36 dB)  Min Gain (-10 dB)	-57 dBV  -11 dBV	-37 dBV  +10 dBV	-20 dBV  +22 dBV	Bal	1/4" TRS: Tip (+), Ring (-), Sleeve Ground
Insert Return	22 k	N/A	-16 dBV	+0 dBV	+18 dBV	Unbal	1/4" TRS: Tip Send, Ring Return, Sleeve Ground
Stereo Line Input	20 k	Max Gain (15 dB)  Min Gain (OFF)	-25 dBV  N/A	-15 dBV  N/A	0 dBV  N/A	Unbal	1/4" Phone
Tape	10 k	N/A	-29 dBV	-10 dBV	N/A	Unbal	RCA Jacks

0 dBV=1V (RMS)

\*\* Min input level (Sensitivity) is the smallest signal that will produce nominal output (0 dBV) with sliders (channel & master) set for maximum gain.

\* Nominal settings are defined as all controls set at 0 dB (or 50% rotation for rotary pots) except the gain adjustment pot, which is as specified in the Input gain control setting column.

#### **Input Channel Equalization**

##### **Channels 1-4**

High EQ  $\pm 15$  dB @ 10 kHz (shelving type)  
Mid EQ  $\pm 15$  dB boost/cut  
Mid frequency select, 100 Hz to 3 kHz  
Low EQ  $\pm 15$  dB @ 70 Hz (shelving type)

##### **Channels 5-8 (and/or inputs 9-16)\***

High EQ  $\pm 15$  dB @ 10 kHz (shelving type)  
Mid EQ  $\pm 15$  dB @ 1 kHz (peak/notch)  
Low EQ  $\pm 15$  dB @ 70 Hz (shelving type)

**\*NOTE:** Inputs 9-16 may be switched to "EQ". See item # 27.

*Specifications subject to change without notice.*



## Output Specifications:

Function	Minimum Load Z (Ohms)	Output Levels		Bal/ UnBal	Connector
		Nominal	Max		
Graphic EQ Out	600	+0 dBV	+22 dBV	Bal	XLR: Pin 1 Gnd Pin 2 (+), Pin 3 (-),
Main L/R	600	+0 dBV	+22 dBV	Bal	1/4" Phone: Tip (+), Ring (-) Sleeve Gnd
Mono	600	+3 dBV	+22 dBV	Bal	XLR: Pin 1 Gnd Pin 2 (+), Pin 3 (-),
Monitor Masters	600	+0 dBV	+22 dBV	Bal	1/4" Phone: Tip (+), Ring (-), Sleeve Gnd
Aux Send	600	+0 dBV	+18 dBV	Unbal	1/4" Phone
Channel Insert Send	600	+0 dBV	+18 dBV	Unbal	1/4" TRS: Tip Send, Ring Return, Sleeve Ground
Headphone	8	+0 dBV	+18 dBV	Unbal	1/4" TRS: Tip Left, Ring Right, Sleeve Ground
Tape	10 k	-0 dBV	+18 dBV	Unbal	RCA

0 dBV=1V (RMS)

### Gain:

#### Mic Input Gain Adj. Range:

Mic Input to L and R Output

10 dB to 56 dB  
76 dB (Max Gain)

#### Line Input Gain Adj Range:

Line Input to L and R Output

-10 dB to 36 dB  
56 dB (Max Gain)

#### Stereo Line Input Gain Adj. Range:

Stereo Line Input to L and R Output

Stereo Line Input to L and R Output

Off to +15 dB  
+26 dB (Max Gain) Direct to L and R Bus  
+36 dB (Max Gain) Thru Channel

### Frequency Response:

Mic Input to L to R Output

Stereo Input to L to R Output

20 Hz to 30 kHz +0 dB / -1 dB  
20 Hz to 30 kHz +0 dB / -1 dB

### Total Harmonic Distortion (THD):

< 0.009% 20 Hz to 20 kHz Mic to L to R output at Nominal Level (20 Hz to 80 kHz BW)

### Graphic Equalizer:

Filter Bandwidth

Filter Frequencies

Maximum Boost & Cut

Input Level

Input Impedance

1 Octave

63, 125, 250, 500, 1 k, 2 k, 4 k, 8 k, 16 k

+12 dB Boost, -15 dB Cut

0 dBV

100 k ohms

*Specifications subject to change without notice.*

**Hum and Noise:**

Output	Residual Noise Ref: 0 dBV	Test Conditions
Master L/R, Monitor 1 & 2	-95 dBV  -83 dBV	All Faders Down  Master Fader Nominal, Channel Faders Nominal, Mic Inputs Terminated @ 150 ohms

(Hum and Noise Measurements: 20 Hz to 22 kHz BW)

**Equivalent Input Noise (EIN):**

-128 dBu (Input terminated with 150 ohms)

**Crosstalk:**

>80 dB Adjacent Input Channels (20 Hz to 20 kHz)

>70 dB Left to Right Outputs (20 Hz to 20 kHz)

**Common Mode Rejection Ratio (Mic Input):**

50 dB min (20 Hz to 20 kHz)

60 dB typ @ 1 kHz

**Meters:**

L/R Master = 12-segment, peak reading

(0 dB= 0 dBV)

**Signal / Overload Indicators:**

Red LED lights 2 dB below clipping.

**Lamp Power:**

12 V DC @ 200 ma.

Power is available between pins 1 and 2 and is electrically isolated from ground.

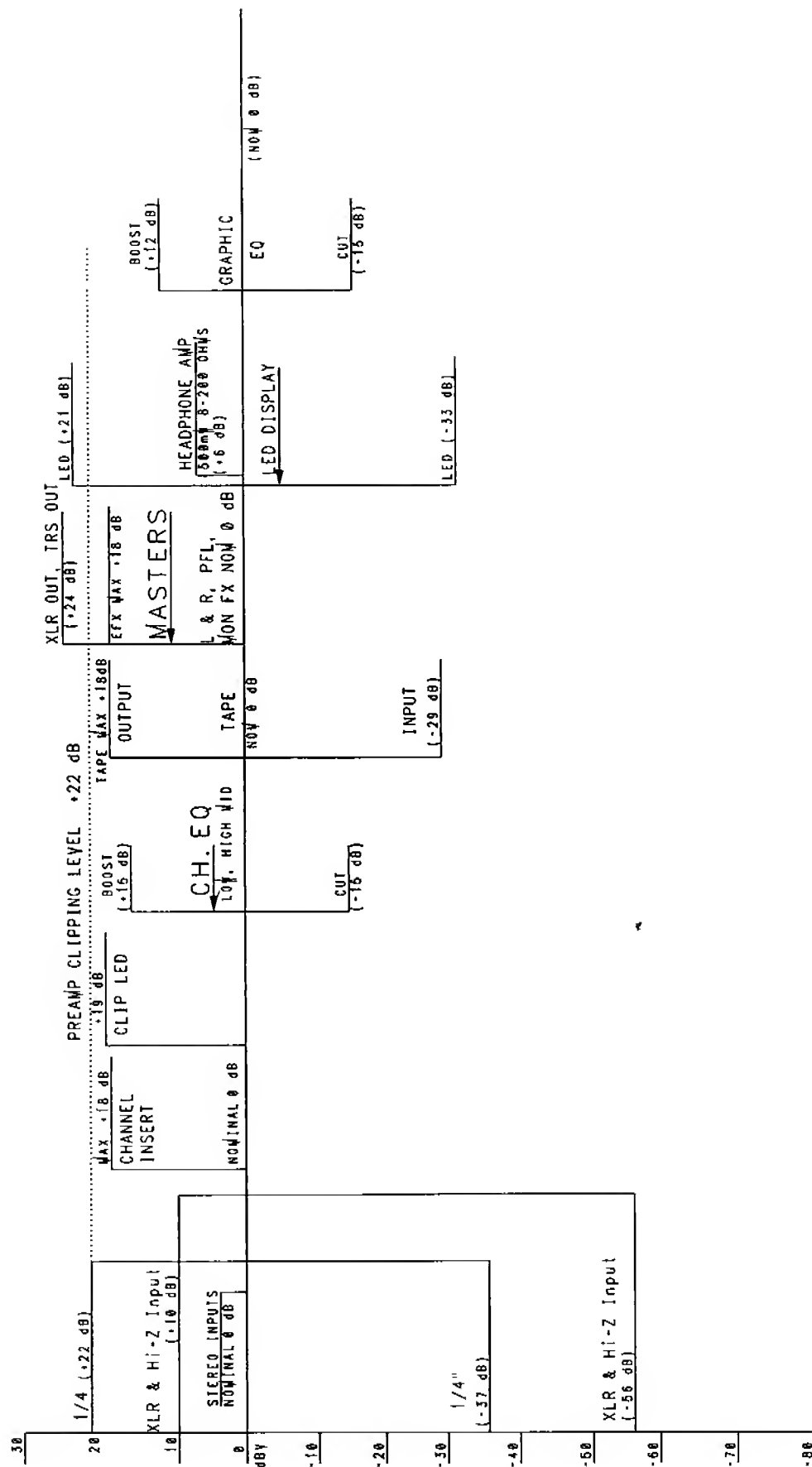
**Power Requirements:**

DOM: 120 V AC 60 Hz, 30 watts Nominal

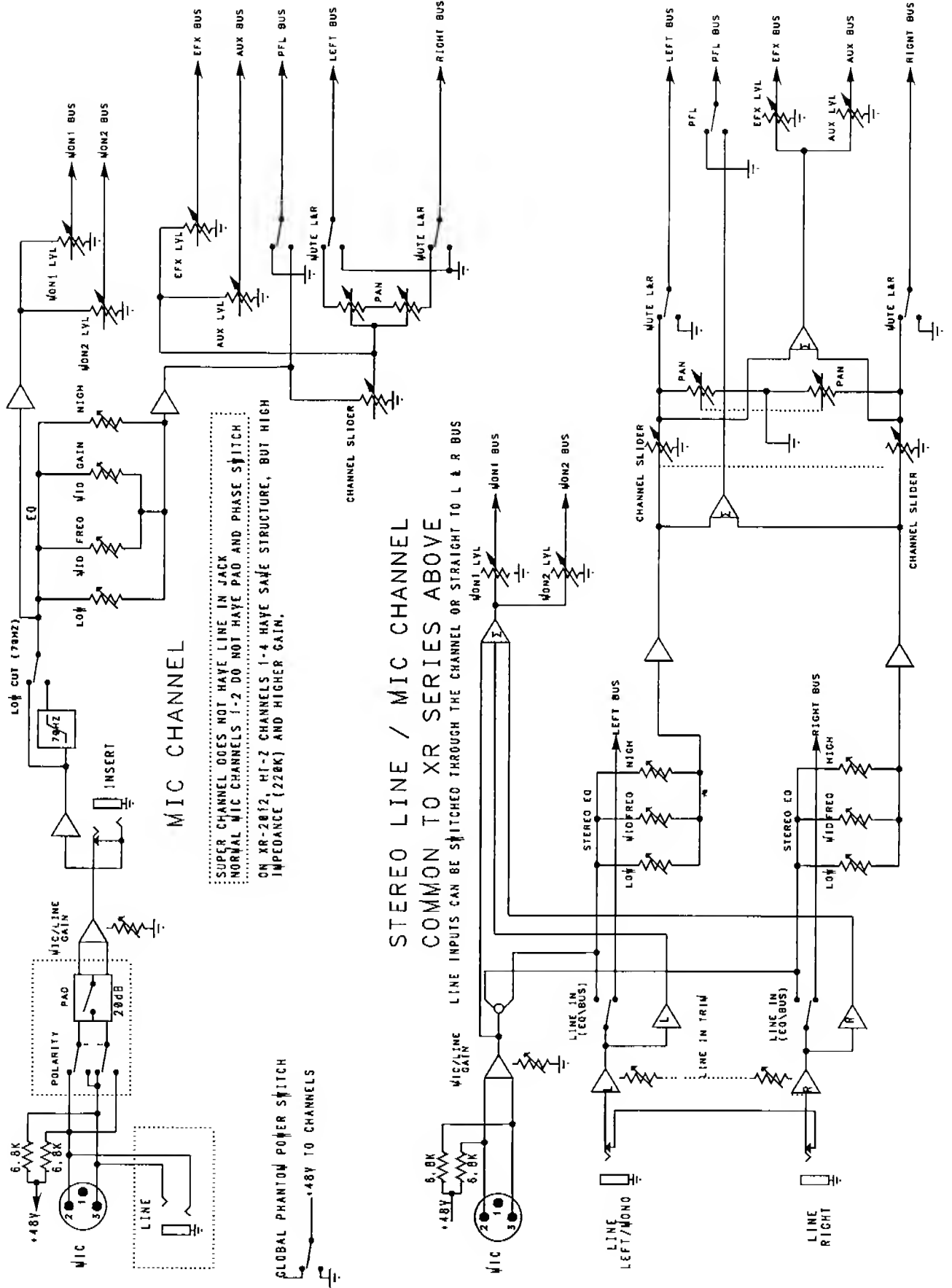
EXP: 230 V AC 50/60 Hz, 30 watts Nominal

*Specifications subject to change without notice.*

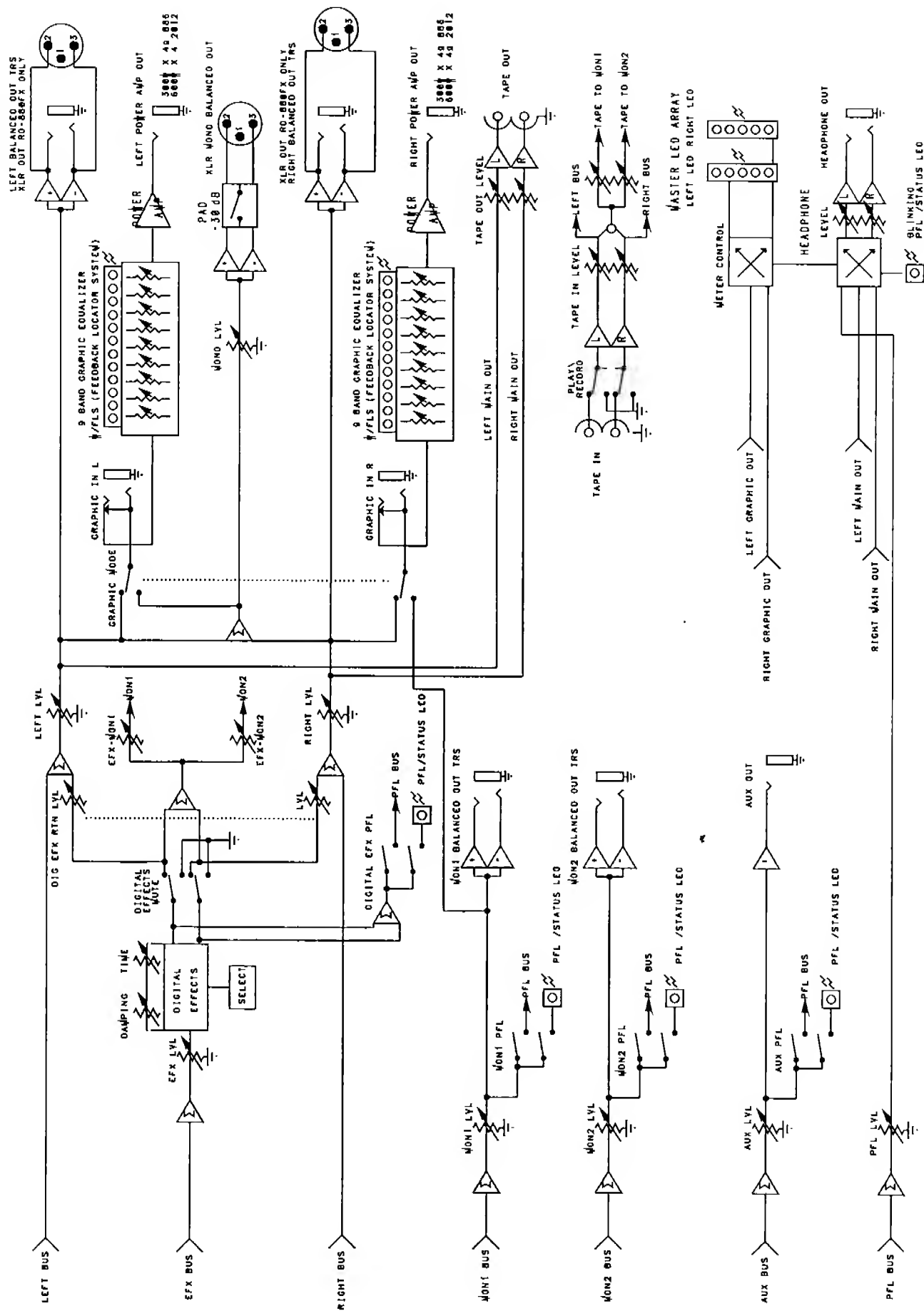
# RQ™ 880FX LEVEL CHART



# RQ™ 880FX LINE/MIC CHANNELS CHART



# RQ™ 880FX MASTER SECTION CHART



THIS LIMITED WARRANTY VALID ONLY WHEN PURCHASED AND REGISTERED IN THE UNITED STATES OR CANADA. ALL EXPORTED PRODUCTS ARE SUBJECT TO WARRANTY AND SERVICES TO BE SPECIFIED AND PROVIDED BY THE AUTHORIZED DISTRIBUTOR FOR EACH COUNTRY.

Ces clauses de garantie ne valent qu'aux Etats-Unis et au Canada. Dans tous les autres pays, les clauses de garantie et de maintenance sont fixées par le distributeur national et assurées par lui selon la législation en vigueur. • • Diese Garantie ist nur in den USA und Kanada gültig. Alle Exportprodukte sind der Garantie und dem Service des Importeurs des jeweiligen Landes unterworfen. • • Esta garantía es válida solamente cuando el producto es comprado en E.U. continentales o en Canada. Todos los productos que sean comprados en el extranjero, están sujetos a las garantías y servicio que cada distribuidor autorizado determine y ofrezca en los diferentes países.

#### PEAVEY ONE-YEAR LIMITED WARRANTY/REMEDY

PEAVEY ELECTRONICS CORPORATION ("PEAVEY") warrants this product, EXCEPT for covers, footswitches, patchcords, tubes and meters, to be free from defects in material and workmanship for a period of one (1) year from date of purchase, PROVIDED, however, that this limited warranty is extended only to the original retail purchaser and is subject to the conditions, exclusions, and limitations hereinafter set forth:

#### PEAVEY 90-DAY LIMITED WARRANTY ON TUBES AND METERS

If this product contains tubes or meters, Peavey warrants the tubes or meters contained in the product to be free from defects in material and workmanship for a period of ninety (90) days from date of purchase; PROVIDED, however, that this limited warranty is extended only to the original retail purchaser and is also subject to the conditions, exclusions, and limitations hereinafter set forth.

#### CONDITIONS, EXCLUSIONS, AND LIMITATIONS OF LIMITED WARRANTIES

These limited warranties shall be void and of no effect, if:

- The first purchase of the product is for the purpose of resale; or
- The original retail purchase is not made from an AUTHORIZED PEAVEY DEALER; or
- The product has been damaged by accident or unreasonable use, neglect, improper service or maintenance, or other causes not arising out of defects in material or workmanship; or
- The serial number affixed to the product is altered, defaced, or removed.

In the event of a defect in material and/or workmanship covered by this limited warranty, Peavey will:

- In the case of tubes or meters, replace the defective component without charge.
- In other covered cases (i.e., cases involving anything other than covers, footswitches, patchcords, tubes or meters), repair the defect in material or workmanship or replace the product, at Peavey's option; and provided, however, that, in any case, all costs of shipping, if necessary, are paid by you, the purchaser.

THE WARRANTY REGISTRATION CARD SHOULD BE ACCURATELY COMPLETED AND MAILED TO AND RECEIVED BY PEAVEY WITHIN FOURTEEN (14) DAYS FROM THE DATE OF YOUR PURCHASE.

In order to obtain service under these warranties, you must:

- Bring the defective item to any PEAVEY AUTHORIZED DEALER or AUTHORIZED PEAVEY SERVICE CENTER and present therewith the ORIGINAL PROOF OF PURCHASE supplied to you by the AUTHORIZED PEAVEY DEALER in connection with your purchase from him of this product. If the DEALER or SERVICE CENTER is unable to provide the necessary warranty service you will be directed to the nearest other PEAVEY AUTHORIZED DEALER or AUTHORIZED PEAVEY SERVICE CENTER which can provide such service, OR

- Ship the defective item, prepaid, to:  
PEAVEY ELECTRONICS CORPORATION  
International Service Center  
326 Hwy. 11 & 80 East  
Meridian, MS 39301

Including therewith a complete, detailed description of the problem, together with a legible copy of the original PROOF OF PURCHASE and a complete return address. Upon Peavey's receipt of these items: If the defect is remedial under these limited warranties and the other terms and conditions expressed herein have been complied with, Peavey will provide the necessary warranty service to repair or replace the product and will return it, FREIGHT COLLECT, to you, the purchaser.

Peavey's liability to the purchaser for damages from any cause whatsoever and regardless of the form of action, including negligence, is limited to the actual damages up to the greater of \$500.00 or an amount equal to the purchase price of the product that caused the damage or that is the subject of or is directly related to the cause of action. Such purchase price will be that in effect for the specific product when the cause of action arose. This limitation of liability will not apply to claims for personal injury or damage to real property or tangible personal property allegedly caused by Peavey's negligence. Peavey does not assume liability for personal injury or property damage arising out of or caused by a non-Peavey alteration or attachment, nor does Peavey assume any responsibility for damage to interconnected non-Peavey equipment that may result from the normal functioning and maintenance of the Peavey equipment.

UNDER NO CIRCUMSTANCES WILL PEAVEY BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, ANY INCIDENTAL DAMAGES, OR ANY CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

THESE LIMITED WARRANTIES ARE IN LIEU OF ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE; PROVIDED, HOWEVER, THAT IF THE OTHER TERMS AND CONDITIONS NECESSARY TO THE EXISTENCE OF THE EXPRESSED, LIMITED WARRANTIES, AS HEREINABOVE STATED, HAVE BEEN COMPLIED WITH, IMPLIED WARRANTIES ARE NOT DISCLAIMED DURING THE APPLICABLE ONE-YEAR OR NINETY-DAY PERIOD FROM DATE OF PURCHASE OF THIS PRODUCT.

SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THESE LIMITED WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

THESE LIMITED WARRANTIES ARE THE ONLY EXPRESSED WARRANTIES ON THIS PRODUCT, AND NO OTHER STATEMENT, REPRESENTATION, WARRANTY, OR AGREEMENT BY ANY PERSON SHALL BE VALID OR BINDING UPON PEAVEY.

In the event of any modification or disclaimer of expressed or implied warranties, or any limitation of remedies, contained herein conflicts with applicable law, then such modification, disclaimer or limitation, as the case may be, shall be deemed to be modified to the extent necessary to comply with such law.

Your remedies for breach of these warranties are limited to those remedies provided herein and Peavey Electronics Corporation gives this limited warranty only with respect to equipment purchased in the United States of America.

#### INSTRUCTIONS—WARRANTY REGISTRATION CARD

- Mail the completed WARRANTY REGISTRATION CARD to:

PEAVEY ELECTRONICS CORPORATION  
P.O. BOX 2898  
Meridian, MS 39302-2898

- Keep the PROOF OF PURCHASE. In the event warranty service is required during the warranty period, you will need this document. There will be no identification card issued by Peavey Electronics Corporation.

- IMPORTANCE OF WARRANTY REGISTRATION CARDS AND NOTIFICATION OF CHANGES OF ADDRESSES:

- Completion and mailing of WARRANTY REGISTRATION CARDS—Should notification become necessary for any condition that may require correction the REGISTRATION CARD will help ensure that you are contacted and properly notified.

- Notice of address changes - If you move from the address shown on the WARRANTY REGISTRATION CARD, you should notify Peavey of the change of address so as to facilitate your receipt of any bulletins or other forms of notification which may become necessary in connection with any condition that may require dissemination of information or correction.

- You may contact Peavey directly by telephoning (601) 483-5365.

## IMPORTANT SAFETY INSTRUCTIONS

**WARNING:** When using electric products, basic cautions should always be followed, including the following.

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be retained for future reference.
3. Obey all cautions in the operating instructions and on the back of the unit.
4. All operating instructions should be followed.
5. This product should not be used near water, i.e., a bathtub, sink, swimming pool, wet basement, etc.
6. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
7. This product should not be placed near a source of heat such as a stove, radiator, or another heat producing amplifier.
8. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
9. Never break off the ground pin on the power supply cord. For more information on grounding, write for our free booklet "Shock Hazard and Grounding."
10. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.
11. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
12. If this product is to be mounted in an equipment rack, rear support should be provided.
13. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag or an ammonia-based household cleaner if necessary. Disconnect unit from power supply before cleaning.
14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation holes or any other openings.
15. This unit should be checked by a qualified service technician if:
  - a. The power supply cord or plug has been damaged.
  - b. Anything has fallen or been spilled into the unit.
  - c. The unit does not operate correctly.
  - d. The unit has been dropped or the enclosure damaged.
16. The user should not attempt to service this equipment. All service work should be done by a qualified service technician.
17. This product should be used only with a cart or stand that is recommended by Peavey Electronics.
18. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures.

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high Sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

**SAVE THESE INSTRUCTIONS!**



Features and specifications subject to change without notice.



Peavey Electronics Corporation • 711 A Street • Meridian • MS • 39301 • (601) 483-5365 • FAX 486-1278

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